

**HOMO-DOUBLY LABELED COMPOSITIONS FOR THE
DETECTION OF ENZYME ACTIVITY IN BIOLOGICAL SAMPLES
ABSTRACT OF THE DISCLOSURE**

5 The present invention provides for novel reagents whose fluorescence changes upon cleavage or a change in conformation of a backbone. The reagents comprise a backbone (*e.g.* nucleic acid, polypeptide, *etc.*) joining two fluorophores of the same species whereby the fluorophores form an H-dimer resulting in quenching of the fluorescence of the fluorophores. When the backbone is cleaved or changes conformation, the fluorophores are
10 separated, no longer forming an H-type dimer, and are de-quenched thereby providing a detectable signal. The use of a single fluorophore rather than an "acceptor-donor" fluorescence resonance energy transfer system offers synthesis and performance advantages.

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